



IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method for providing continuation passing in operating a virtual machine having a stack memory, comprising: ~~to provide continuation passing in a wireless device, wherein the virtual machine comprises a stack memory, and the method comprises:~~

encountering a context-creating trigger;

responsive to said encountering of said context-creating trigger:

constructing a continuation block, said continuation block comprising a block header and a stack fragment, said stack fragment comprising a range of said stack memory between a current stack top address and a current stack base address; and in response to the trigger, wherein the continuation block comprises a stack fragment derived from the stack memory;

pushing said continuation block onto said stack memory;

encountering an evaluation instruction; and

responsive to said encountering of said evaluation instruction:

popping said continuation block from said stack memory;

pushing said stack fragment portion of said continuation block onto said stack memory;

setting said current stack top address to a start of said stack fragment of said stack memory; and

setting said current stack base to a end of said stack fragment of said stack memory.
~~storing the stack fragment from the continuation block on the stack memory in response to the evaluation instruction.~~

2. (Original) The method of claim 1, wherein the context-creating trigger comprises a selected program instruction.

3. (Original) The method of claim 1, wherein the context-creating trigger comprises a program marker associated with a program instruction.

4. (Canceled)

5. (Original) The method of claim 1, further comprising jumping to selected program code to evaluate the continuation.

6. (Currently amended) A virtual machine for use in a wireless device having an embedded processor, the virtual machine comprising:

a stack memory that comprises logic to push and pop ~~store and retrieve~~ information;

a logic to encounter a context-creating trigger;

a logic for responding to an encounter with said context-creating trigger by:

constructing to construct ~~constructing to construct~~ a continuation block, said in response to the trigger,
~~wherein the continuation block comprises~~ comprising a block header and a stack
fragment, said stack fragment comprising a range of said stack memory between a current
stack top address and a current stack base address; and ~~derived from the stack memory;~~

pushing said continuation block onto said stack memory;

a logic to encounter an evaluation instruction; and

a logic for responding to an encounter with said evaluation instruction by:

popping said continuation block from said stack memory;

pushing said stack fragment portion of said continuation block onto said stack memory;

setting said current stack top to a start of said stack fragment; and

setting said current stack base to an end of said stack fragment. ~~to store the stack fragment from the continuation block on the stack memory in response to the evaluation instruction.~~

7. (Original) The virtual machine of claim 6, wherein the context-creating trigger comprises a context evaluation instruction.

8. (Original) The virtual machine of claim 6, wherein the context-creating trigger comprises a program marker associated with a program instruction.

9. (Canceled)

10. (Original) The virtual machine of claim 6, further comprising logic to jump to selected program code to evaluate the continuation.

11. (Currently amended) A computer readable media tangibly storing comprising ~~program~~ instructions that when executed by processing logic provides a virtual machine having a stack memory [[VM]] that performs continuation passing, said instructions comprising: ~~wherein the virtual machine comprises a stack memory, and the computer readable media comprises:~~

~~program~~ instructions for encountering a context-creating trigger;

~~program~~ instructions for responding to an encounter with said context-creating trigger by:

constructing a continuation block, said continuation block comprising a block header and in response to the trigger, wherein the continuation block comprises a stack fragment comprising a range of said stack memory between a current stack top address and a current stack base address; and derived from the stack memory;

pushing said continuation block onto said stack memory;

~~program~~ instructions for encountering an evaluation instruction; and

~~program~~ instructions for responding to an encounter with said evaluation instruction by:

popping said continuation block from said stack memory;

pushing said stack fragment portion of said continuation block onto said stack memory;

setting said current stack top to a start of said stack fragment; and

setting said current stack base to an end of said stack fragment. ~~storing the stack fragment from the continuation block on the stack memory in response to the evaluation instruction.~~

12. (Currently amended) A virtual machine ~~for use in a wireless device having an embedded processor, the virtual machine~~ comprising:

~~means for providing~~ a stack memory means;

a means for encountering a context-creating trigger;

a means for responding to an encounter with said context-creating trigger by:

constructing a continuation block, said continuation block comprising a block header and a stack fragment, said stack fragment comprising a range of said stack memory means between a current stack top address and a current stack base address; and in response to the trigger, wherein the continuation block comprises a stack fragment derived from the stack memory;

pushing said continuation block onto said stack memory;

a means for encountering an evaluation instruction; and

a means for responding to an encounter with said evaluation instruction, comprising:

a means for popping said continuation block from said stack memory;

a means for pushing said stack fragment portion of said continuation block onto
said stack memory;

a means for setting said current stack top to a start of said stack fragment; and

a means for setting said current stack base to an end of said stack fragment. ~~storing the
stack fragment from the continuation block on the stack memory in response to the evaluation
instruction.~~

13. (Canceled)

14. (Original) The virtual machine of claim 12, further comprising means for jumping to selected program code to evaluate the continuation.

15. (Currently amended) A wireless device having an embedded processor, the wireless device comprising:

a stack memory that comprises logic to push and pop ~~store and retrieve~~ information; and

a virtual machine that operates to perform continuation passing, the virtual machine comprising:

a logic to encounter a context-creating trigger;

a logic for responding to an encounter with said context-creating trigger by:

constructing to construct a continuation block, said continuation block comprising a block header and a stack fragment, said stack fragment comprising a range of said stack memory between a current stack top address and a current stack base address; and in response to the trigger, wherein the continuation block comprises a stack fragment derived from the stack memory;

pushing said continuation block onto said memory;

a logic to encounter an evaluation instruction; and

a logic for responding to an encounter with said evaluation instruction by:

popping said continuation block from said stack memory;

pushing a stack fragment portion of said continuation block onto said stack memory;

setting said current stack top to a start of said stack fragment; and

setting said current stack base to an end of said stack fragment. to store the stack fragment from the continuation block on the stack memory in response to the evaluation instruction.